**The Concept of Formative Assessment**

While many educators are highly focused on state tests, it is important to consider that over the course of a year, teachers can build in many opportunities to assess how students are learning and then use this information to make beneficial changes in instruction. This diagnostic use of assessment to provide feedback to teachers and students over the course of instruction is called formative assessment. It stands in contrast to summative assessment, which generally takes place after a period of instruction and requires making a judgment about the learning that has occurred (e.g., by grading or scoring a test or paper).

**PURPOSE AND BENEFITS OF FORMATIVE ASSESSMENT**

Black and William (l998b) define assessment broadly to include all activities that teachers and students undertake to get information that can be used diagnostically to alter teaching and learning. Under this definition, assessment encompasses teacher observation, classroom discussion, and analysis of student work, including homework and tests, assessments become formative when the information is used to adapt teaching and learning to meet student needs.

When teachers know how students are progressing and where they are having trouble, they can use this information to make necessary instructional adjustments, such as re-teaching, trying alternative instructional approaches, or offering more opportunities for practice. These activities can lead to improved student success.

Feedback given as part of formative assessment helps learners become aware of any gaps that exist between their desired goal and their current knowledge, understanding, or skill and guides them through actions necessary to obtain the goal (Ramaprasad, 1983; Sadler, 1989). The most helpful type of feedback on tests and homework provides specific comments about errors and specific suggestions for improvement and encourages students to focus their attention thoughtfully on the task rather than on simply getting the right answer (Bangert-Drowns, Kulick, & Morgan, 1991; Elawar & Como, 1985). This type of feedback may be particularly helpful to lower achieving students because it emphasizes that students can improve as a result of effort rather than be doomed to low achievement due to some presumed lack of innate ability. Formative assessment helps support the expectation that all children can learn to high levels and counteracts the cycle in which students attribute poor performance to lack of ability and therefore become discouraged and unwilling to invest in further learning (Ames, 1992; Vispoel & Austin, 1995).

While feedback generally originates from a teacher, learners can also play an important role in formative assessment through self-evaluation. Two experimental research studies have shown that students who understand the learning objectives and assessment criteria and have opportunities to reflect on their work show greater improvement than those who do not (Fontana & Fernandes, 1994; Frederikson & White, 1997). Students with learning disabilities who are taught to use self-monitoring strategies related to their understanding

**A Formative Assessment Process**

• Week 1 - 8 question (or less) assessment concerning week 1 materials

• Week 2 - 8 question (or less) assessment concerning week 2 materials

• Week 3 - 20 question (or less) benchmark concerning week 1-3 materials

• Week 4 - 8 question (or less) assessment concerning week 4 materials

• Week 5 - 8 question (or less) assessment concerning week 5 materials

• Week 6 - 20 question (or less) benchmark concerning week 1-6 materials

• Week 7 - 8 question (or less) assessment concerning week 7 materials

• Week 8 - 8 question (or less) assessment concerning week 8 materials

• Week 9 - 20 question (or less) benchmark concerning week 1-9 materials

• This process continues throughout the course - with the exception of the final three weeks before the State Assessment. A full length Exam using testing criteria will assist the students in becoming test ready (building stamina).

• Each assessment is created by the PLC during Unit Planning

• Each assessment is analyzed by the PLC weekly

• The key question: based on our results - what will we do next week to address the identified areas of concern?

**A Differentiated Grading Process**

**Designed to Encourage Student Learning**

• A, B, C and "Not Yet"

• Variety of grading sources (homework, classwork, projects, tests ... )

• Develop Rubrics "before" assigning the task

• Prepare exemplars

• The key to "grading" is "student learning" not "sorting"

of reading and writing tasks also show performance gains (McCurdy & Shapiro, 1992; Sawyer, Graham, & Harris, 1992).

**EXAMPLES OF FORMATIVE ASSESSMENT**

Since the goal of formative assessment is to gain an understanding of what students know (and don't know) in order to make responsive changes in teaching and learning, techniques such as teacher observation and classroom discussion have an important place alongside analysis of tests and homework.

Black and Wiliam (l998b) encourage teachers to use questioning and classroom discussion as an opportunity to increase their students' knowledge and improve understanding. They caution, however, that teachers need to make sure to ask thoughtful, reflective questions rather than simple, factual ones and then give students adequate time to respond. In order to involve everyone, they suggest strategies such as the following:

\* Invite students to discuss their thinking about a question or topic in pairs or small groups, then ask a representative to share the thinking with the larger group (sometimes called think-pair-share).

\* Have students write their understanding of vocabulary or concepts before and after instruction.

\* Ask students to summarize the main ideas they've taken away from a lecture, discussion, or assigned reading.

\* Have students complete a few problems or questions at the end of instruction and check answers.

\* Interview students individually or in groups about their thinking as they solve problems.

\* Assign brief, in-class writing assignments (e.g., "Why is this person or event representative of this time period in history?)

(The November/December 1997 issue of Clearinghouse magazine is devoted to practical ideas for formative assessment. See especially Mullin and Hill for ideas for history classes, McIntosh for mathematics, Childers and Lowry for science, and Bonwell for higher education.)

In addition to these classroom techniques, tests and homework can be used formatively if teachers analyze where students are in their learning and provide specific, focused feedback regarding performance and ways to improve it. Black and William (1998b) make the following recommendations:

\* Frequent short tests are better than infrequent long ones.

\* New learning should be tested within about a week of first exposure.

\* Be mindful of the quality of test items and work with other teachers and outside sources to collect good ones.

Portfolios, or collections of student work, may also be used formatively if students and teachers annotate the entries and observe growth over time and practice (Duschl & Gitomer, 1997).

**Defining Formative and Summative Assessments**

The terms "formative" and "summative" do not have to be difficult, yet the definitions have become confusing in the past few years. This is especially true for formative assessment. In a balanced assessment system, both summative and formative assessments are an integral part of information gathering. Depend too much on one or the other and the reality of student achievement in your classroom becomes unclear.

**Summative Assessments** are given periodically to determine at a particular point in time what students know and do not know. Many associate summative assessments only with standardized tests such as state assessments, but they are also used at and are an important part of district and classroom programs. Summative assessment at the district/classroom level is an accountability measure that is generally used as part of the grading process. The list is long, but here are some examples of summative assessments:

• State assessments

• District benchmark or interim assessments

• End-of-unit or chapter tests

• End-of-term or semester exams

• Scores that are used for accountability for schools (AYP) and students (report card grades).

The key is to think of summative assessment as a means to gauge, at a particular point in time, student learning relative to content standards. Although the information that is gleaned from this type of assessment is important, it can only help in evaluating certain aspects of the learning process. Because they are spread out and occur after instruction every few weeks, months, or once a year, summative assessments are tools to help evaluate the effectiveness of programs, school improvement goals, alignment of curriculum, or student placement in specific programs. Summative assessments happen too far down the learning path to provide information at the classroom level and to make instructional adjustments and interventions during the learning process. It takes formative assessment to accomplish this.

**Formative Assessment** is part of the instructional process. When incorporated into classroom practice, it provides the information needed to adjust teaching and learning while they are happening. In this sense, formative assessment informs both teachers and students about student understanding at a point when timely adjustments can be made. These adjustments help to ensure students achieve, targeted standards-based learning goals within a set time frame. Although formative assessment strategies appear in a variety of formats, there are some distinct ways to distinguish them from summative assessments.

One distinction is to think of formative assessment as "practice." We do not hold students accountable in "grade book fashion" for skills and concepts they have just been introduced to or are learning. We must allow for practice. Formative assessment helps teachers determine next steps during the learning process as the instruction approaches the summative assessment of student learning. A good analogy for this is the road test that is required to receive a driver's license. What if, before getting your driver's license, you received a grade every time you sat behind the wheel to practice driving? What if your final grade for the driVing test was the average of all of the grades you received while practicing? Because of the initial low grades you received during the process of learning to drive, your final grade would not accurately reflect your ability to drive a car. In the beginning of learning to drive, how confident or motivated to learn would you feel? Would any of the grades you received provide you with guidance on what you needed to do next to improve your driving skills? Your final driving test, or summative assessment, would be the accountability

measure that establishes whether or not you have the driving skills necessary for a driver's· license-not a reflection of all the driving practice that leads to it. The same holds true for classroom instruction, learning, and assessment.

Another distinction that underpins formative assessment is student involvement. If students are not involved in the assessment process, formative assessment is not practiced or implemented to its full effectiveness. Students need to be involved both as assessors of their own learning and as resources to other students. There are numerous strategies teachers can implement to engage students. In fact, research shows that the involvement in and ownership of their work increases students' motivation to learn. This does not mean the absence of teacher involvement. To the contrary, teachers are critical in identifying learning goals, setting clear criteria for success, and designing assessment tasks that provide evidence of student learning.

One of the key components of engaging students in the assessment of their own learning is providing them with descriptive feedback as they learn. In fact, research shows descriptive feedback to be the most significant instructional strategy to move students forward in their learning. Descriptive feedback provides students with an understanding of what they are doing well, links to classroom learning, and gives specific input on how to reach the next step in the learning progression. In other words, descriptive feedback is not a grade, a sticker, or "good job!" A significant body of research indicates that such limited feedback does not lead to improved student learning.

There are many classroom instructional strategies that are part of the repertoire of good teaching. When teachers use sound instructional practice for the purpose of gathering information on student learning, they are applying this information in a formative way. In this sense, formative assessment is pedagogy and clearly cannot be separated from instruction. It is what good teachers do. The distinction lies in what teachers actually do with the information they gather. How is it being used to inform instruction? How is it being shared with and engaging students? It's not teachers just collecting information/data on student learning; it's what they do with the information they collect.

Some of the instructional strategies that can be used formatively include the following:

• **Criteria and goal setting** with students engages them in instruction and the learning process by creating clear expectations. In order to be successful, students need to understand and know the learning target/goal and the criteria for reaching it. Establishing and defining quality work fogether, asking students to participate in establishing norm behaviors for classroom culture, and determining what should be included in criteria for success are all examples of this strategy. Using student work, classroom tests, or exemplars of what is expected helps students understand where they are, where they need to be, and an effective process for getting there.

• **Observations** go beyond walking around the room to see if students are on task or need clarification. Observations assist teachers in gathering evidence of student learning to inform instructional planning. This evidence can be recorded and used as feedback for students about their learning or as anecdotal data shared with them during conferences.

• **Questioning strategies** should be embedded in lesson/unit planning. Asking better questions allows an opportunity for deeper thinking and prOVides teachers with significant insight into the degree and depth of understanding. Questions of this nature engage students in classroom dialogue that both uncovers and expands learning. An "exit slip" at the end of a class period to determine students' understanding of the day's lesson or qUick checks during instruction such as "thumbs up/down" or "red/green" (stop/go) cards are

also examples of questioning strategies that elicit immediate information about student learning. Helping students ask better questions is another aspect of this formative assessment strategy.

• **Self and peer assessment** helps to create a learning community within a classroom. Students who can reflect while engaged in metacognitive thinking are involved in their learning. When students have been involved in criteria and goal setting, self-evaluation is a logical step in the learning process. With peer evaluation, students see each other as resources for understanding and checking for quality work against previously established criteria.

**• Student record keeping** helps students better understand their own learning as evidenced by their classroom work. This process of students keeping ongoing records of their work not only engages students, it also helps them, beyond a "grade," to see where they started and the progress they are making toward the learning goal.

All of these strategies are integral to the formative assessment process, and they have been suggested by models of effective middle school instruction.

**Balancing Assessment**

As teachers gather information/data about student learning, several categories may be included. In order to better understand student learning, teachers need to consider information about the products (paper or otherwise) students create and tests they take, observational notes, and reflections on the communication that occurs between teacher and student or among students. When a comprehensive assessment program at the classroom level balances formative and summative student learning/achievement information, a clear picture emerges of where a student is relative to learning targets and standards. Students should be able to articulate this shared information about their own learning. When this happens, student-led conferences, a formative assessment strategy, are valid. The more we know about individual students as they engage in the learning process, the better we can adjust instruction to ensure that all students continue to achieve by moving forward in their learning.